UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,859	12/03/2004	Casimir Johan Crawley	PU020269	7325

7590   11/16/2007

Joseph S Tripoli
Thomson Licensing Inc
PO Box 5312
Princeton, NJ 08543-5312

EXAMINER
HU, RUI MENG

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
11/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/516,859	CRAWLEY, CASIMIR JOHAN
	Examiner	Art Unit
	RuiMeng Hu	2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _23 August 2007_.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-17_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-17_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All　b) ☐ Some * c) ☐ None of:

　　　1. ☐ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed on 08/23/2007 have been fully considered but they are not persuasive.

Applicant argues that **Bowles (US Patent 6389548)** in view of **Ozawa et al. (US 2001/0033531)** fails to teach the limitation "a processor for polling said decoder for a loss of a phase lock in said demodulating of said audio file signal" of claim 1. According to the description of present application, (on page 4 lines 1-3, 14-16) the processor 24 continually polls the EFM decoder 32 to determine if a phase lock loop in the demodulation of the incoming audio file signal has been lost 33, the EFM decoder 32 utilizes a phase lock loop, however the description fails to disclose the detail of the phase lock loop and unlocked condition of the phase lock loop.

Bowles discloses a EFM decoder (figure 3, EFM decoder 38) comprising a digital phase lock loop (hfSync) wherein the digital phase lock loop includes a phase detector 33 (figure 4, phiDet(PD) 33) for comparing the phase of an input signal (CXD_hf) with a reference phase signal (figure 4, column 9 lines 27-48, reference phase signal output of DTO 35) and generates a phase difference or phase error (figure 4, HSY_phiErr or PD_phiErr) based on the comparison, the generated phase error (HSY_phiErr or PD_phiErr) represents a "unlocked" condition of the phase lock loop. During demodulation, "a transition" commonly and repeatedly occurs (column 10 lines 37-54)

and a phase error occurs when "a transition" occurs (column 10 lines 37-54), thus when

a new transition occurs, a new phase error (PD_phiErr) is occurred/generated, said *new*

phase error can be interpreted as "a *loss* of a phase lock" during demodulation. Slicer

37 monitors (polls) every phase error (PD_phiErr) which occurred during "a transition",

(column 8 lines 6-19) the value PD_phiErr indicates the direction of "the HF transition"

to which it applies, and adjusts the threshold to minimize the difference between

consecutive phase errors, thus the Slicer 37 monitors (polls) and utilizes said new

phase error which occurred during said "a new transition", therefore the Slicer 37 for

polling the EFM decoder for a loss of a phase lock in demodulating of an input CXD_hf

signal.

Bowles discloses a Compact Disc (CD) player (Background of the Invention),

however Bowles fails to specifically disclose the signal from a compact disc (CD) is

music audio file signal.

In the same field of endeavor, Ozawa et al. disclose a Compact Disc (CD) player

plays audio data (Background of the Invention, figure 2, audio data played back from a

CD 91).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the selection techniques taught by

Ozawa et al. into the art of Bowles as to play music audio file from a music audio CD.

Bowles further discloses resetting and reinitializing the demodulating in reply to

said loss in said phase lock (column 8 lines 50-56, column 10 lines 37-54, the phase

lock loop is reinitialized in reply to the phase error (loss in phase lock) wherein the

phase error is generated due to occurrence of "a transition").

Response to Amendment

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

4.   **Claims 1-2, 4-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bowles (US Patent 6389548) in view of **Ozawa et al. (US 2001/0033531).**

Consider **claim 1**, Bowles clearly disclose apparatus comprising: a receiver

(figure 3, compact disc (CD) player, CD Pickup 33) for receiving an CD signal; a

decoder (figure 3, EFM Demodulator 38) for demodulating said CD signal; and a

processor (column 8 lines 6-67, figure 3, slicer 37 and hfSync 32) for polling said

decoder for a loss of a phase lock in said demodulating of said CD signal.

Bowles discloses a Compact Disc (CD) player (Background of the Invention),

however Bowles fails to specifically disclose the signal from a compact disc (CD) is

music audio file signal.

In the same field of endeavor, Ozawa et al. disclose a Compact Disc (CD) player

plays audio data (Background of the Invention, figure 2, audio data played back from a

CD 91).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the selection techniques taught by

Ozawa et al. into the art of Bowles as to play music audio file from a music audio CD.

Consider **claim 2 as applied to claim 1**, Bowles as modified by Ozawa et al.

discloses wherein said processor resets and reinitializes said decoder in response to

said loss in said phase lock (column 8 lines 50-56).

Consider **claim 4 as applied to claim 1**, Bowles as modified by Ozawa et al.

discloses said decoder comprises an eight to fourteen modulation EFM decoder (figure

3, EFM Demodulator 38).

Consider **claim 5 as applied to claim 1** Bowles as modified by Ozawa et al.

discloses wherein said decoder outputs a digital audio stream (figure 3, EFM

Demodulator 38 continuously outputs 8-bit Data Bytes).

Consider **claim 6 as applied to claim 5**, Bowles as modified by Ozawa et al.

fails to disclose wherein said digital audio stream conforms to an I2S audio stream.

However, official notice is taken that I2S is used for digital electronic devices (as a CD player) is well known in the art. Therefore, it would have been obvious to use I2S interface to correspond the existing digital audio stream, and output stereo.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Bowles (US Patent 6389548)** as modified by **Ozawa et al. (US 2001/0033531)** in view of **Zuqert et al. (US 6466832).**

Consider **claim 3 as applied to claim 1,** Bowles as modified by Ozawa et al. fails to disclose wherein said receiver comprises 900 MHz radio frequency reception circuitry.

In the related art, Zuqert et al. disclose a wireless receiver comprises 900 MHz radio frequency reception circuitry and capable of receiving CD digital audio signals (figure 7, Summary of the Invention).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Zuqert et al. into the art of Bowles as modified by Ozawa et al. as to include a 900 MHz radio frequency reception circuitry to receive CD digital audio signals wirelessly for increasing system dynamic.

Claim 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Zuqert et al. (US 6466832)** in view of **Bowles (US Patent 6389548).**

Consider **claim 7**, Zuqert et al. clearly disclose a computer readable medium having software instructions recorded thereon, wherein the software instructions (column 16 lines 33-45, the processor containing software instructions adaptively controls operation of the receiver), when executed by a processor, perform the steps of: receiving a modulated audio file signal (figure 7, Abstract); demodulating said modulated audio file signal (figure 7, down-converters 38, base-band processors 40).

However, Zuqert et al. fail to specifically disclose polling said demodulating for a loss in a phase lock in said demodulating; resetting and reinitializing said demodulating in reply to said loss in said phase lock.

In the related art, Bowles discloses polling the demodulating for a loss in a phase lock in demodulating (column 8 lines 6-67, figure 3, slicer 37 and hfSync 32); resetting and reinitializing the demodulating in reply to said loss in said phase lock (column 8 lines 50-56, column 10 lines 37-54).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Bowles into the art of Zuqert et al. as to efficiently demodulate received CD digital audio signals.

Consider **claim 8 as applied to claim 7**, Zuqert et al. as modified by Bowles disclose demodulating is a digital eight to fourteen modulation digital decoding (Bowles, figure 3, EFM Demodulator 38).

Consider **claim 9 as applied to claim 7**, Zuqert et al. as modified by Bowles

disclose receiving is synchronized to a 900 MHz range carrier frequency modulated by

said audio file signal (Zuqert, column 16 lines 58-60).

Consider **claim 10 as applied to claim 7,** Zuqert et al. as modified by Bowles

disclose wherein said decoder outputs a digital audio stream (Zuqert, figure 7, digital

audio stream going into D/A converter 42).

Consider **claim 11 as applied to claim 7**, Zuqert et al. as modified by Bowles

disclose wherein said polling is carried out by a processor (Bowles, figure 3, slicer 37).

Consider **claim 12**, Zuqert et al. clearly disclose a method for detecting a signal

loss in a wireless audio file signal transmission (Abstract, figure 7, column 18 lines 17-

26), said method comprising the steps of: receiving an audio file signal (Abstract);

decoding said audio file signal (figure 7, down-converters 38, base-band processors

40); and polling received modulated signal for a loss of a phase lock in carrier frequency

(column 18 lines 17-26).

However, Zuqert et al. fail to specifically disclose polling said decoding for a loss

of a phase lock in said decoding of said audio file signal.

In the related art, Bowles discloses polling the decoding for a loss of a phase lock

in decoding of CD file signal. (column 8 lines 6-67, figure 3, slicer 37 and hfSync 32).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the selection techniques taught by

Bowles into the art of Zuqert et al. as to efficiently demodulate received CD digital audio

signals.

Consider **claim 13 as applied to claim 12**, Zuqert et al. as modified by Bowles disclose further comprising the step of resetting and reinitializing said decoding in response to said loss in said phase lock in said decoding (Bowles, column 8 lines 50-56).

Consider **claim 14 as applied to claim 12**, Zuqert et al. as modified by Bowles disclose said step of receiving comprises 900 MHz range carrier frequency synchronizing (Zuqert, column 16 lines 58-60).

Consider **claim 15 as applied to claim 12,** Zuqert et al. as modified by Bowles disclose said step of decoding comprises an eight to fourteen bit modulation EFM decoding (Bowles, figure 3, EFM Demodulator 38).

Consider **claim 16 as applied to claim 12,** Zuqert et al. as modified by Bowles disclose wherein said step of decoding outputs a digital audio stream (Bowles, figure 3, EFM Demodulator 38 continuously outputs 8-bit Data Bytes).

Consider **claim 17 as applied to claim 16**, Zuqert et al. as modified by Bowles fail to disclose wherein said digital audio stream conforms to an I2S audio stream. However, official notice is taken that I2S is used for digital electronic devices (as a CD player) is well known in the art. Therefore, it would have been obvious to use I2S interface to correspond the existing digital audio stream, and output stereo.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed**

to: Commissioner for Patents
                 P.O. Box 1450
                 Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

                 Customer Service Window
                 Randolph Building
                 401 Dulany Street
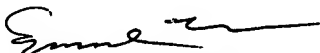   Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105.

The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m.,

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

RuiMeng Hu
R.H./rh
November 7, 2007

EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600